



072003 d PCT/PTO 07 JUL 2003

Atty. Dkt. No.: SALK2370-2  
(088802-5456)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Noel et al.

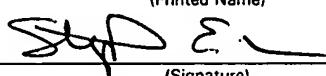
Title: METHODS AND COMPOSITIONS  
FOR DETERMINING ENZYMATIC  
ACTIVITY

Appl. No.: 10/031,918

Filing Date: 01/22/2002

Examiner: Unknown

Art Unit: Unknown

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Stephen E. Reiter. Reg. No. 31,192	
(Printed Name)	
	
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**IDS TRANSMITTAL**

Sir:

Transmitted herewith for the above-identified application please find:

- (1) Information Disclosure Statement.
- (2) Completed Form PTO-1449.
- (3) Copies of the cited references
- (4) Return postcard

In re Application of:  
Noel et al.  
Application No.: 10/031,918  
Page 2

PATENT  
Atty. Dkt. No.: SALK2370-2  
(088802-5455)

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872.

Respectfully submitted,

Date

7/3/03

FOLEY & LARDNER  
Customer Number: 30542



30542

PATENT TRADEMARK OFFICE

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By

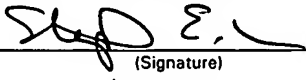
Stephen E. Reiter  
Attorney for Applicant  
Registration No. 31,192



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(088802-5455)

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Applicant: Noel et al.  
  
Title: METHODS AND COMPOSITIONS  
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**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872.

Respectfully submitted,

Date

7/3/03

By

Stephen E. Reiter

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Registration No. 31,192

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

## Complete if Known

Application Number	10/031,918
Filing Date	01/22/2002
First Named Inventor	Joseph P. Noel
Group Art Unit	
Examiner Name	
Attorney Docket Number	SALK2370-2 (088802-5455)

as many sheets as necessary)

1 of 3

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
		Eckermann et al., "New pathway to polyketides in plants." <i>Nature</i> 396:387-390, (1998).	
		Ferrar et al., "Chalcone synthase from alfalfa." Database for 'Online!', ID 1BI5, June 22, 1999.	
		Ferrar et al., "Structure of chalcone synthase and the molecular basis of plant polyketide biosynthesis." <i>Nature Structural Biology</i> , 8: 775-784, 1999.	
		He et al., "Structural modeling and site-directed mutagenesis of the actinorhodin $\beta$ -ketoacyl-acyl carrier protein synthase." <i>Journal of Bacteriology</i> , 182: 2619-1623, 2000.	
		Helariutta et al., "Chalcone synthase-like genes active during corolla development are differently expressed and encode enzymes with different catalytic properties in <i>Gerbera hybrida</i> (Asteraceae)." <i>Plant Molecular Biology</i> , 28: 47-60, 1995.	
		Huang et al., "Crystal structure of $\beta$ -ketoacyl-acyl carrier protein synthase II from <i>E.coli</i> reveals the molecular architecture of condensing enzymes." <i>The EMBO Journal</i> , 17: 1183-1191, 1998.	

Examiner Signature		Date Considered	
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		Jez et al., "Dissection of malonyl-coenzyme A decarboxylation from polyketide formation in the reaction mechanism of a plant polyketide synthase." <i>Biochemistry</i> , 39:890-902, 2000.	
		Jez et al., "Structure of chalcone synthase and the molecular basis of plant polyketide biosynthesis." Meeting information: Annual Meeting of the American Societies for Experimental Biology on Biochemistry and Molecular Biology, San Francisco, CA., May 16-20, 1999. <i>FASEB Journal</i> : Vol. 13, No. 7, p. A1392, XP002158823, Abstract 355.	
		Junghans et al., "Stress responses in alfalfa ( <i>Medicago sativa</i> L.) 15. Characterization and expression patterns of members of a subset of the chalcone synthase multigene family." <i>Plant Mol. Biol.</i> , 22:239-253, (1993).	
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		Lanz et al., "The role of cysteines in polyketide synthases: Site-directed mutagenesis of resveratrol and chalcone synthases, two key enzymes in different plant-specific pathways." <i>J. Biol. Chem.</i> 266:9971-9976, (1991).	
		Mathieu et al., "The 2.8 Å crystal structure of peroxisomal 3-ketoacyl-CoA thiolase of <i>Saccharomyces cerevisiae</i> : a five-layered $\alpha\beta\alpha\beta$ structure constructed from two core domains of identical topology." <i>Structure</i> , 2:797-808, (1994).	
		Otwinowski and Minor, "Processing of X-ray diffraction data collected in oscillation mode." <i>Methods Enzymol.</i> 276:307-26, (1997).	
		Preisig-Mueller et al., "Plant polyketide synthases leading to stilbenoids have a domain catalyzing malonyl-CoA:CO <sub>2</sub> exchange, malonyl-CoA decarboxylation, and covalent enzyme modification and a site for chain lengthening." <i>Biochemistry</i> 36:8349-8358, (1997).	
		Raiber et al., "Molecular and enzymatic characterization of two stilbene synthases from eastern white pine ( <i>Pinus strobus</i> ): A single Arg/His difference determines the activity and the pH dependence of the enzymes." <i>FEBS Letters</i> , 361: 299-302, 1995.	
		Schroder, "A family of plant-specific polyketide synthases: facts and predictions." <i>Trends in Plant Science</i> , 2: 373-378, 1997.	

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		Schroeder et al., "Plant polyketide synthases: a chalcone synthase-type enzyme which performs a condensation reaction with methylmalonyl-CoA in the biosynthesis of C-methylated chalcones." <i>Biochemistry</i> , 37:8417-8425, (1998).	
		Schroder and Schroder, "Stilbene and Chalcone synthases: Related enzymes with key functions in plant-specific pathways." <i>Zeitschrift Fuer Naturforschung. Section C. Biosciences</i> , 45c: 1-8, 1990.	
		Tropf et al., "Reaction mechanisms of homodimeric plant polyketide synthases (stilbene and chalcone synthase)." <i>J.Biol.Chem.</i> , 270:7922-7928, (1995).	
		Welle & Grisebach, "Isolation of a novel NADPH-dependent reductase which coacts with chalcone synthase in the biosynthesis of 6'-deoxychalcone." <i>FEBS Lett.</i> 236:222-225, (1988).	
		International Search Report from International Application PCT/US00/20674.	

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